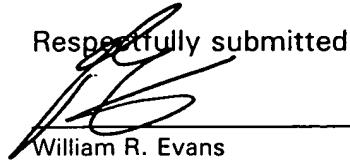


REMARKS

The above amendatory action is taken solely for the purpose of avoiding claim fee that would otherwise accrue due to the presence of multiple dependent claims.

Respectfully submitted,

A handwritten signature in dark ink, appearing to be 'WR Evans', is written over a horizontal line.

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1. (amended) An end-to-end estimation of the bandwidth available in a client-server connection established over a packet switching network, comprising:

a routine to compute samples of available bandwidth by taking into accounts the flow of account packets received by the client, if the routine is implemented at the receiver side, or by taking into accounts acknowledgment packets received by the sender, if the routine is implemented at the sender side;

a routine that implements a discrete time low-pass filter to obtain a filtered value of the samples of available bandwidth.

6. (amended) Method for adapting the amount of data for unit of time sent by the server to the client according to claim 5, over a packet network, comprising an end-to-end bandwidth estimation comprising:

a routine to compute samples of available bandwidth by taking into account packets received by the client, if the routine is implemented at the receiver side, or by taking into account acknowledgment packets received by the sender, if the routine is implemented at the sender side; and

a routine that implements a discrete time low-pass filter

to obtain a filtered value of the samples of available bandwidth,

wherein the low-pass filter is a low-pass filter according to claim 3 or 4.

8. (amended) Method for adaptively setting congestion window and slow start threshold in the TCP/IP protocol according to claim 7, comprising an end-to-end bandwidth estimation comprising:

a routine to compute samples of available bandwidth by taking into account packets received by the client, if the routine is implemented at the receiver side, or by taking into account acknowledgment packets received by the sender, if the routine is implemented at the sender side; and

a routine that implements a discrete time low-pass filter to obtain a filtered value of the samples of available bandwidth,

wherein the low-pass filter is a low-pass filter according to claim 3 or 4.

10. (amended) Method for adaptively selecting the quality of coding, or the numbers of layers to be transmitted in a layered coding of an audio/video source using the TCP

protocol, or the UDP protocol or the RTP protocol according to claim 9, comprising and end-to-end bandwidth estimation comprising:

a routine to compute samples of available bandwidth by taking into account packets received by the client, if the routine is implemented at the receiver side, or by taking into account acknowledgment packets received by the sender, if the routine is implemented at the sender side; and

a routine that implements a discrete time low-pass filter to obtain a filtered value of the samples of available bandwidth over a packet network, comprising an end-to-end bandwidth,

wherein the low pass filter is a low pass filter according to claim 3 or 4.

11. (amended) Method for adaptively selecting the quality of coding, or the numbers of layers to be transmitted in a layered coding of an audio/video source according to claim 9 or 10, comprising:

increasing step by step the quality of coding, or the numbers of layers to be transmitted in a layered coding of an audio/video source until congestion is experienced by means of control packets;

setting the quality of coding or select the numbers of layers to be transmitted after that a congestion episode is signaled by means of control packets in according with the bandwidth estimation according to any of claims 1 to 4; comprising:

a routine to compute samples of available bandwidth by taking into account packets received by the client, if the routine is implemented at the receiver side, or by taking into account acknowledgment packets received by the sender, if the routine is implemented at the sender side; and

a routine that implements a discrete time low-pass filter to obtain a filtered value of the samples of available bandwidth over a packet network, comprising an end-to-end bandwidth; and

increasing again step by step the quality of coding or the numbers of layers to be transmitted in a layered coding to probe for extra available bandwidth.

12. (amended) Method for setting the Advertised Window of TCP equal to the minimum of the Advertised Window and the bandwidth estimate times the minimum round trip time, wherein the samples are computed according to claim 1 or 2, and the bandwidth estimate is computed according to any of claim 1, 3

or 4.by:

a routine to compute samples of available bandwidth by taking into account packets received by the client, if the routine is implemented at the receiver side, or by taking into account acknowledgment packets received by the sender, if the routine is implemented at the sender side; and

a routine that implements a discrete time low-pass filter to obtain a filtered value of the samples of available bandwidth over a packet network, comprising an end-to-end bandwidth.